



#### **AECOM**

This report is a component of the SPUR Regional Strategy, a vision for the future of the San Francisco Bay Area

spur.org/regionalstrategy

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#### Acknowledgement

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DANIE DRANKWALTER

Fifty years from now, everyone can find a place to live in the Bay Area. We value long-time residents and welcome newcomers from around the world. We protect what is precious and still find ways to grow. We grow by making great places for people to live and work.

# What Will Life Be Like in the Year 2070?

#### In these pages, we envision a Bay Area where:

Everyone is housed and has access to quality public amenities.

People of color are safe and welcome in streets and public spaces.

Commuters have time for family and community life.

Elders get out and about with family and friends, aging in community.

Kids walk to school together, expanding their sense of self and sense of place.

Teens set off on bikes or on foot to creeks, lakes, beaches and parks.

All kinds of families, in all types of homes, live in community together.

The SPUR Regional Strategy provides a civic vision for the Bay Area's next half century and a policy road map for how to get there. While the other reports in the initiative lay out policy recommendations for making change, *Model Places* is a project to envision what those outcomes would look and feel like, how they would play out in all the different kinds of places where people live and work.

What we see ahead is a hopeful picture — if those of us who live and work in the Bay Area can come together to make, and accept, real change.

For SPUR's guiding principles on where growth should go, see our report *A Civic Vision for Growth* at spur.org/civicvisionforgrowth. The complete library of Regional Strategy reports is available at spur.org/regionalstrategy/reports



RYAN FLOYD JOHNSON



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# A Better Future for the Bay Area



RYAN FLOYD JOHNSON

Today, the Bay Area is home to 7.6 million people, in 2.8 million housing units and 3.7 million jobs. But over the next 50 years, these numbers are expected to increase by as many as 4 million people and 2 million jobs.

The six Model Places described here demonstrate that, if each place does its part, the Bay Area has plenty of room to grow while preserving open space and addressing its protracted housing shortage. This report also shows how accommodating new growth can enable existing areas to become better places for people, retaining many of their essential qualities while supporting diversity and inclusion, public health, green mobility and community life.

The growth we project over the next half century — up to 79% in housing units and 57% in jobs — is daunting, but the pace (44,000 housing units annually) has been achieved here before. This report explores what it would take for the Bay Area to do it again.

If we continue the current trajectory of inaction, housing prices will continue to soar, pushing more people into grinding commutes to sprawling suburbs or out of the region entirely. But if we are willing to manage growth as a matter of urgent public interest, we can serve those who are here and welcome those who are yet to come while making the region more livable, more sustainable and more equitable. This will require every place in the Bay Area to do its part.

#### **SPUR's Regional Strategy Values:**

#### **Stewardship:**

We are all responsible for this beautiful place, for one another and for future generations. All of us deserve clean air, clean water, good health and safety from climate threats.

#### **Cooperation:**

The Bay Area communities are all in this together. Most of our toughest problems - from housing to traffic to sea level rise - demand regional collaboration.

#### **Equity:**

Justice is an essential element of a stable, healthy society, and systemic racism requires a systemic response. Policy is a critical tool in this effort.

#### **Prosperity:**

A thriving economy is essential to provide both jobs and public resources. We must not take our prosperity for granted.

#### Leadership:

Time and again, the Bay Area has pioneered influential ideas and new solutions. Now more than ever, we should be a model to the nation and the world.

<sup>&</sup>lt;sup>1</sup> The Center for Continuing Study of the California Economy provided SPUR with population and job projections as detailed in its report *High and Low Projections of Jobs and Population for the Bay Area to 2070: Projection Framework, Specific Assumptions and Results.* That report includes a high growth projection and a low growth projection based on national projections for jobs and population as well as assumptions about immigration, growth in various economic sectors and the share of the population and job growth that the Bay Area will attract. SPUR has chosen to base its analysis on the high growth projection in order to determine the number of housing units needed to meet population growth. The housing analysis was conducted by the Concord Group for SPUR.

# **Place Types**

This report examines how each place type might help accommodate the region's projected growth. SPUR developed this "place types" analysis by dividing the nine-county Bay Area into a grid of half-mile squares and assigning data on land use and physical conditions to each.<sup>2</sup>

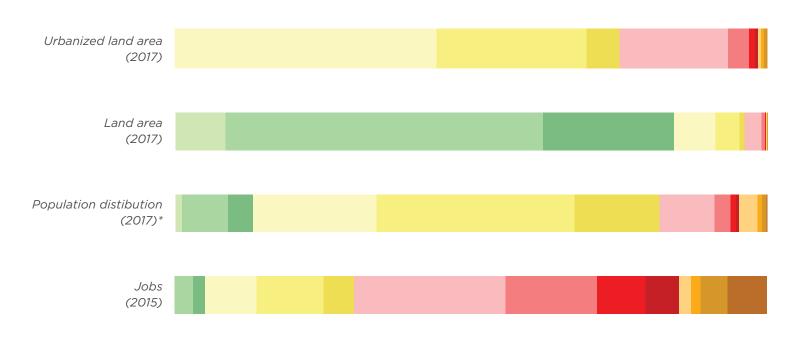
The analysis incorporated five variables: residential density, job density, intersection density, surface permeability and land use mix. Next, a cluster analysis identified natural groupings of like conditions in the data, and each square was assigned to one of 14 place types.

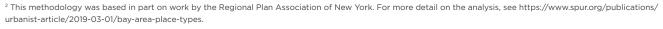
These categories cover all of the land in the nine-county Bay Area, from urban downtowns to undeveloped open space, providing a physical portrait of the region. Once place types were defined, demographic, transportation and other information were mapped onto them to create a quantitative and spatial portrait of the region's communities and ways of life.

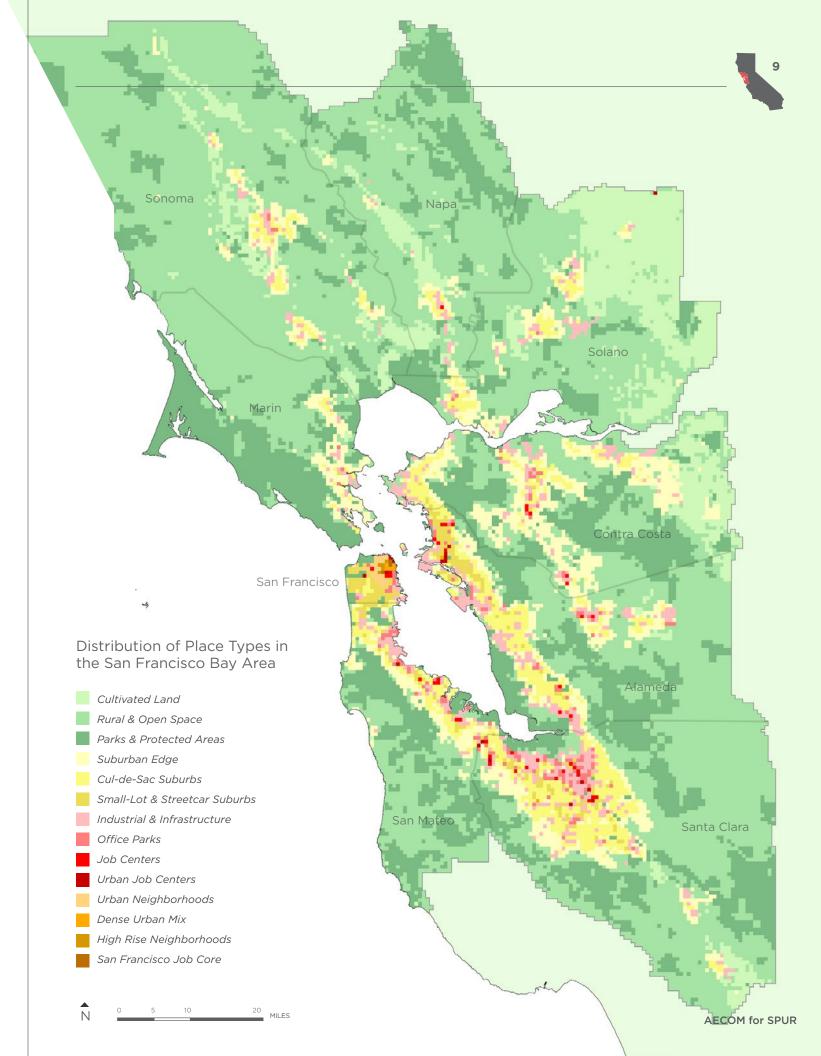
SPUR's projections assumed that growth would not be permitted in open spaces, which provide essential ecological, recreational and hazard-mitigation services.

#### **Key findings:**

- Roughly 84% of the land in the nine-county region is in rural and open space or agriculture. Twentysix percent of that land is already protected as parks or habitat.
- About 75% of the urbanized land lies in primarily singlefamily residential neighborhoods, representing 69% of the region's total housing stock.
- The kinds of dense, mixed-use areas that support walking and highquality transit make up only 1% of the urbanized area but are home to 5% of residents and 29% of jobs.
- Nearly 22% of the urbanized area (or nearly 250 square miles) is made up of low-density commercial types, areas ripe for transformation given the right polices.

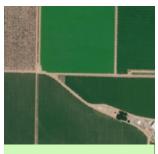






In this report, six contrasting place types (noted with blue numerals) are reimagined as Model Places showing different strategies for how each might grow, look and feel over 50 years of transformation.

#### **Open Space**





Primarily in the North and far East Bay; includes vineyards, orchards and other crops.

8.5% of total land area

**1.2%** of total housing

**0.8**% of total jobs



**Rural & Open Space** 

Spread over half the region; includes rangeland, other working lands and rural settlements.

53.6% of total land area

**7.8**% of total housing

2.7% of total jobs



**Parks & Protected Areas** 

Widely distributed; includes federal, state, regional and city parks and protected habitat.

22.2% of total land area

**4.5**% of total housing

2.0% of total jobs

## **Primarily Housing**



Suburban Edge

Very low-density housing; single-family homes at the edge of open space.

7.0% of total land area

19.9% of total housing

9.0% of total jobs



**Cul-de-Sac Suburbs** 

Low-density housing; rings the center of almost every city in the region.

4.0% of total land area

**30.9**% of total housing

10.9% of total jobs



**Small-Lot & Streetcar** Suburbs

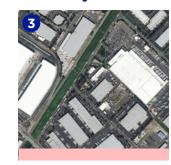
Medium-density housing; mostly in older San Francisco, East Bay and Peninsula neighborhoods.

0.9% of total land area

14.6% of total housing

5.2% of total jobs

#### **Primarily Jobs**



Industrial & Infrastructure

Very low concentration of jobs; large, low buildings with few intersections.

2.8% of total land area

**9.1**% of total housing

**25.4**% of total jobs



Office Parks

Low concentration of jobs; one- to three-story buildings in suburban settings for office, retail

and other jobs. 0.6% of total land area

**2.9**% of total housing

**15.6**% of total jobs



**Job Centers** 

Medium concentration of jobs; multistory commercial buildings in many cities.

0.2% of total land area

1.2% of total housing

8.2% of total jobs



**Urban Job Centers** 

High concentration of jobs; minimum 10-story offices in job centers and large cities.

0.1% of total land area

0.8% of total housing

**5.6**% of total jobs

#### Mixed Uses



**Urban Neighborhoods** 

Multifamily housing; high concentration of retail and jobs; San Francisco and Oakland only.

0.1% of total land area

**4.2**% of total housing

2.3% of total jobs



**Dense Urban Mix** 

Residential and job towers; San Francisco and Oakland only.

0.02% of total land area

1.2% of total housing

4.8% of total jobs



**High Rise Neighborhoods** 

Multistory housing and some jobs on small blocks; San Francisco only.

0.02% of total land area

1.4% of total housing

1.2% of total jobs



San Francisco Job Core

Highest concentration of jobs in the region; downtown San Francisco only

0.01% of total land area

**0.3**% of total housing

6.3% of total jobs

## **Illustrative Futures**

This report allocates the Bay Area's projected growth to the different place types according to a combination of factors, including the proportion of each type's existing land area, housing and job supply, its environmental and transportation performance and its relative capacity for transformation.<sup>3</sup>

The growth assigned to each place type can easily be translated into the average growth that each half-square-mile grid cell of that type would need to accommodate in order to provide housing and jobs without sprawling into the region's open space or displacing low-income residents. For each of the Model Places presented here, one idealized grid cell is shown as it might develop according to the specified urban design strategies.

#### **Place Types Today**

Each discussion of a Model Place begins with a profile of existing conditions, including the place type's total land area, population and jobs, and performance metrics including Walk Score and transportation mode share. A description of its physical form, building stock and overall assets and challenges sets the context for the strategies that might best shape its growth and evolution.

#### **Place Types of Tomorrow**

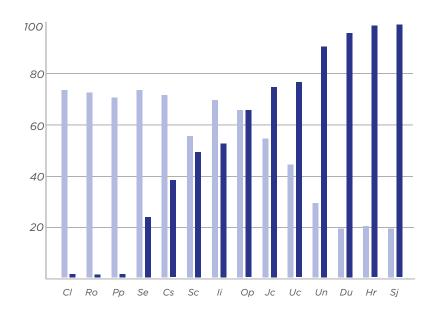
An idealized vision for each model place is then presented, based on a set of key design principles that are targeted to its particular assets and challenges. Does this place consist of many small parcels or a

few large ones? Do its streets and blocks support walking and public transit, or would that require major interventions? What sorts of changes are most reasonable and would have the most impact in this place? With these principles in mind, a program of development, public realm improvements, and transportation and environmental interventions is presented and quantified while architectural renderings and illustrations suggest how these changes might look and feel.

In all cases, the intent is to imagine these places growing more welcoming, inclusive and humane, meeting people's needs not simply for shelter and mobility but for belonging and connection to one another and to the natural world.

#### Walking and Driving: How Each Place Type Performs

Average drive alone rate and Walkscore by place type



<sup>&</sup>lt;sup>3</sup> Each place type's appropriate "share" of the region's growth is necessarily a normative decision. For more information on the analysis, see https://www.spur.org/publications/urbanist-article/2019-03-01/bay-area-place-types



Walkscore

# A Conundrum: Where Should Growth Go?

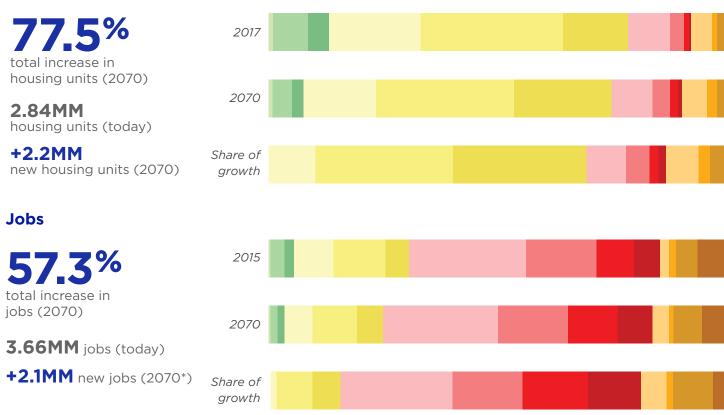
Because most of the Bay Area's growth occurred after World War II, most of our built environment is designed around the car. Places that support walking, biking and public transit are quite scarce. Though good land use planning would direct as much growth as possible into these high-performance settings, the region's vast swaths of low-density development must also be part of the solution.

For example, the "urban neighborhoods" place type has some of the lowest rates of driving but represents only 0.6% of the region's urbanized land. Cul-de-sac suburbs, by contrast, are highly auto-dependent but occupy more than 40 times the land area. Small changes to these very large areas can have a significant impact on housing supply while improving their environmental performance and welcoming new residents.

The distribution of growth in this study strives to balance the importance of growth in the most efficient and sustainable locations with the imperative that every part of the region do its part to address our urgent housing shortage. Although the growth is apportioned as an average amount for each grid cell of a given type, in practice it would vary according to the context, with policies and incentives directing more growth to areas served by transit. To illustrate the region's abundant capacity, the future conditions in this document's imagery show more than the average growth required.

#### **Growth Projections by Place Types**

#### **Housing units**



#### Diverging Fortunes: Economic and Racial Inequities Within Place Types

This document deals primarily with how different place types can accommodate a meaningful share of the region's projected growth through improved physical planning and urban design. Because of the Bay Area's severe housing shortage, this report places a strong emphasis on housing growth and the public realm improvements that make increases in density livable.

While housing growth is essential to addressing the region's affordability crisis, it does not occur in a vacuum but in real communities that have been shaped by inequitable histories. Although the places considered here share common physical patterns that reflect similar origins, in many cases they have had very different economic and demographic trajectories, often accompanied by racial segregation and other forms of injustice.

Some areas have thrived, supported by a range of policies and investments.

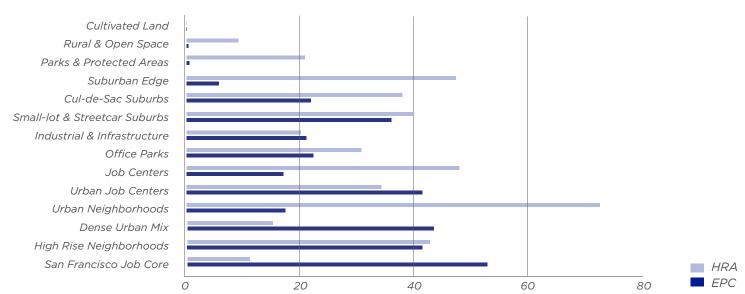
Others have suffered waves of neglect, disinvestment and pollution driven by inequitable policies, from racial covenants to redlining to exclusionary zoning. These divergent fortunes have compounded across generations, with affluent white families able to borrow, invest and pass wealth and opportunities to their children and grandchildren while marginalized communities see their fortunes diminish.

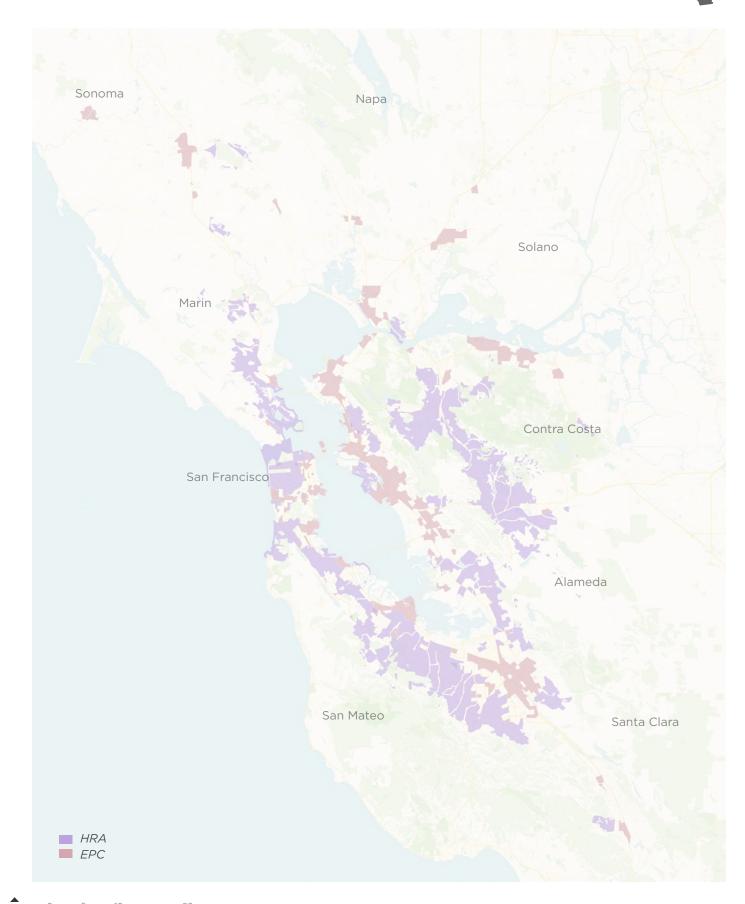
Although the physical solutions to growth under these diverging fortunes may be similar (we need housing everywhere; we all benefit from walkable streets and green space), the policies that will deliver these changes in a socially restorative manner may differ considerably. With that in mind, this document recommends policies that differ according to the socioeconomic conditions of the place in question. It draws on two economic and social designations developed by regional and state agencies equity priority communities and high-resource areas (see below) to highlight two extreme kinds of settings, understanding that there is a full spectrum between them.

The Metropolitan Transportation Commission has designated equity priority communities based on a variety of factors related to race, poverty and housing challenges<sup>4</sup>. Using these designations, this document emphasizes public investment and housing stabilization strategies in economically marginalized communities so that new growth and investment can benefit low-income residents rather than driving displacement.

The state of California has defined other places as high-resource areas, which "according to research, offer low-income children and adults the best chance at economic advancement, high educational attainment, and good physical and mental health." These are generally more affluent areas with access to high-quality schools and jobs. For these areas, this document recommends the liberalization of restrictive zoning coupled with mechanisms like impact fees and inclusionary zoning to translate high market value into affordable housing and a more diverse population.

#### % of each place type in Equity Priority Communities or High-Resource Areas





N MILES AECOM for SPUR



# Cul-de-Sac Suburbs

In 50 years, the Bay Area's cul-desac suburbs complete the transition from a car-dependent monoculture to a network of diverse, inclusive neighborhoods.



# **Cul-de-Sac Suburbs Today**

One of the region's most widespread place types, built for the car and an idealized nuclear family

Cul-de-sac suburbs are traditional auto-oriented residential areas that began to be built after World War II.

They consist almost exclusively of detached, single-family houses at low densities. The wide streets are designed in a hierarchy (local, collector, arterial), with few intersections and points of connection. Sidewalks are limited or absent. All of this results in an environment that may be serene and quiet but does not support access by walking, cycling or transit. Even a minor errand (the proverbial quart of milk) requires a car trip.

These suburbs were designed around a mid-20th-century ideal of the nuclear family — two parents (a male breadwinner and a female homemaker), several children and perhaps a pet. The physical expression of this ideal was codified by zoning laws, homeowners' associations (HOAs) and restrictive covenants, many of which were explicitly designed to filter out people of color, extended families (more typical of immigrant groups) and people of modest means. Although these discriminatory lines have blurred over time, the continued practice of banning apartments, cottages and major alterations keeps powerful social barriers in place.

In recent decades, the suburbs have become much more diverse but still do not readily accommodate the empty nesters who cannot age in place, childless couples who want a modest home, multigenerational families or unrelated adults looking for affordable homes and a sense of community.

Over time, these neighborhoods can add a range of services and housing types and offer alternatives to driving while also retaining much of their quiet residential character.

#### **Assets**

- Detached homes with yards
- Quiet, spacious character
- Orientation to some types of family life
- Meets some cultural ideals/ aspirations

#### **Challenges**

- · Car-dependent
- Small, individually owned parcels
- · One housing type designed for just one family type
- Limited services, amenities and
- Resource-inefficient, hard to service
- · Limited connectivity and walkability

20.3%

transit accessible

48.8

walkscore

place-type average

square miles

290.5 879,000 housing units

25.8% of urbanized Bay Area 30.9% of regional housing (2017)

across place-type

2,549,598 400,000

33.4% of total Bay Area (2017)

11% of regional jobs (2015)

place-type average

average drive alone rate



## **Cul-de-Sac Suburbs Tomorrow**

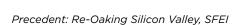
## From homogeneity to diverse, inclusive neighborhoods

Fast-forward 50 years: While the quiet character remains, retirees, young adults and others have moved into a diversified housing stock, and basic services are available within a short walk or bike trip. New forms of transportation provide real alternatives to the car. while paths and greenways connect to a regional trail network for both commuting and exploring the outdoors. Kids and seniors are out on local streets, which have been reclaimed as green spaces.



#### **Streets for** People

Twentieth-century residential streets are often much wider than necessary, with sweeping curves and other features that encourage speeding and present safety hazards. Some lack sidewalks entirely. Streets could be repurposed and roadways narrowed to provide community amenities and green space while improving safety and preventing stormwater runoff. The Dutch woonerf, or shared street, provides a useful model. Neighbors on a common street could come together to identify priorities (such as playgrounds, gardens or barbecue areas) that could make better use of these low-demand rights-of-way while allowing slow vehicular access.





Precedent: Portland Infill Housing



#### Neighborhood Hubs

Suburban residential subdivisions tend to have just one or two ways in or out where they connect to larger streets and other uses like retail, services and restaurants. These access locations often take up larger parcels of land and could be redesigned as neighborhood activity hubs. While most would support only limited retail, these hubs could complement and enrich community life and provide a destination by foot or bike. They might include:

- Modestly denser housing for a variety of populations
- Shuttle service to regional transit
- Multipurpose community centers
- A café or convenience store
- Coworking or remote office spaces
- Medical, dental, wellness, child care and other services

of total increase in jobs (2070)

of total increase in housing units (2070)

**879,000** housing units (today)

**+655,000** new housing units (2070)

**400,000** jobs (today)

**+160,000** new jobs (2070)



#### **Diverse Homes for Diverse Households**

Today, most of these neighborhoods are zoned exclusively for detached single-family homes, privileging a narrow range of households. Young people, multigenerational families and the elderly are not well served. Loosening restrictive zoning could allow and encourage:

- Accessory dwelling units (ADUs) within or next to primary residences. These could serve a young family member, aging parents and caregivers, or be rented out to tenants as a source of income, with little impact on the character of the neighborhood.
- "Missing middle" housing (two to six units) and townhouses through the redevelopment of a single parcel or the consolidation of a few adjacent parcels.
- Modest apartment buildings on larger parcels that often exist at subdivision edges and entry points. These could serve as affordable housing, workforce housing or senior housing that would allow people to age in the community, freeing up larger homes.
- Right-of-way width reductions to accommodate new housing



#### **Neighborhood Nature**

The low density and spaciousness of cul-de-sac suburbs creates opportunities to integrate ecological processes into the landscape. Greenery has always been part of the suburbs' appeal, but often in a resource-intensive form like front lawns. Through incentives, standards and education, the suburban landscape could be retooled to provide greater ecological functions, require less water and less maintenance and expand an often-limited aesthetic. Elements might include:

- "Re-oaking" or otherwise reintroducing native species in both private and common landscapes, providing habitat for native birds, mammals and invertebrates
- Increasing tree canopy coverage in narrowed roadways and along wide
- · Restoring waterways from culverts, ditches and channels into swales and creeks, supporting both water quality and public amenities
- Depaying overbuilt streets to increase green space and permeable surfaces and reduce heat islands and stormwater runoff

#### **Focus on** Access

These neighborhoods were designed for cars, so a meandering path to the exit is no big deal. But for those on foot, the lack of connectivity is punishing, even if a destination is nearby. In many cases, a small opening in the lot pattern could dramatically shorten travel distances, and improving connections to nearby trails and bike routes could open a wealth of active transportation and recreational options. If kids can walk to school and residents can conveniently stroll to the store, important climate and public health benefits can follow. Steps might include:

- Identifying parcels where openings would have the greatest impact, such as the end of cul-de-sacs or parcels that back onto subdivision walls or external streets
- Creating a right of first refusal for the city or HOA to acquire the property at sale, or using zoning or incentives to encourage the property's redevelopment with through-access
- Repurposing medians, berms and buffer landscapes as paths and trails for cyclists and pedestrians to access the regional network



# **Illustrative example of Cul-de-Sac Suburbs Place Type**

Designed for Cars, Not Walking

The street network has few intersections, many dead ends and only a couple of ways in or out, making it very hard to walk or cycle through.

#### They All Look the Same

Houses are mostly all one size and one type, designed around a traditional nuclear family structure rather than the diverse households of the Bay Area.

#### Tomorrow

Today

250

#### new jobs and services

#### A Node at the Edge

At points of entry, lots are a bit bigger and host a mix of neighborhood services and amenities. Assisted living allows residents to age in the neighborhood. A shared community space, café, shops, day care, health care and gym are within walking distance, and autonomous shuttle stops serve regional transit stations.

# +3 miles

#### green trails

#### A Regional Trail

Buffer landscaping has been turned into a path for walking and biking, which connects to a regional trail with access to the bay and other destinations. More trees and shade are provided through a community re-oaking program.

+900

**Hard to Serve** 

and inefficient.

Given the low densities

and long distances, public

services like water, power,

sewer, road maintenance

and transit are expensive

#### new housing units

#### **Missing Middle Housing**

With exclusionary zoning lifted, a variety of housing types become possible.

# 800ft~

#### **Pedestrian Access**

A few key lots have been redeveloped with pedestrian passages when the owners were ready to sell. Now, instead of going the long way around, kids can walk to school and older folks have easier access to the community center.

+20%

#### backyard homes

Accessory Dwelling Units (ADUs) Small units are tucked into the backyards and garages of up to 20% of the neighborhood homes, increasing housing access and affordability with little change to the neighborhood character.

### Average increase required to support growth

+563

**+137** 

average increase in housing units per square half-mile average increase in jobs per square half-mile

\*The image to the left represents considerably more growth than the average, for illustrative purposes. Within each place type, growth should be concentrated in areas served by transit.

#### **Key Policies**

- Eliminate single-family zoning regionwide.
- Allow and incentivize homeowners to build ADUs and smaller developers to provide "missing middle" housing that complements the neighborhood.
- Review and revise fire access codes to reduce street widths.
- Allow and encourage narrow, slow and shared-function streets.
- Identify key parcels to allow pedestrian through-access upon sale or redevelopment.
- Limit water use in landscaping. Provide education and incentives for native and drought-tolerant plantings.
- Zone for denser, mixed development at the edges, oriented around gathering spaces and transit.
- Provide or facilitate autonomous electric shuttle loops between residential suburbs and regional transit stops.

#### **Cul-de-Sac Suburbs tomorrow**

A shared street: Neighbors have taken over the street to create play space for kids and a place to gather, exercise and stroll. Cars move through at a slower pace, between native plantings and permeable swales.









ARTHUR MOUNT



# Small Lot and Streetcar Suburbs

In 50 years, small lot and streetcar suburbs retain their walkable character, while new residents allow the neighborhood to support even more amenities.



# **Small Lot and Streetcar Suburbs Today**

Built before the car, these neighborhoods have great fabric and diverse communities

Small lot and streetcar suburbs are older. moderate-density residential neighborhoods that were built in the region's core before the mass adoption of the automobile; they were often oriented around streetcar or commuter rail lines.

Although most of the streetcar lines are gone, many of these neighborhoods are quite walkable and still well served by public transit. They tend to have a street grid and relatively small blocks and lots. While single-family homes are generally the most common building type, these areas also include a mix of small apartment buildings (two to four units) and some commercial uses, especially along major streets.

These features make these

neighborhoods good places to grow. Additional residents will support transit, retail and amenities, resulting in walkable neighborhoods that allow for a relatively low-emissions lifestyle. But these can also be difficult places to change because residents' satisfaction often comes with a political resistance to any alterations to the character of the place. Large buildable parcels are scarce, and it can be expensive to build in such a highly constrained setting.

Socially and economically diverse, these areas endured some redlining and disinvestment in the 20th century, then rebounded and became more desirable. Their relative scarcity combined with high demand means that many of these neighborhoods have experienced gentrification and the associated pressures of displacement, higher housing costs and cultural change. It is thus particularly important that growth in these neighborhoods be informed by

policies that enable longtime residents - particularly people of color - to remain and thrive.

#### **Assets**

- Walkable streets with diverse building stock and housing types
- · Diverse communities with deep local connections
- Commercial districts and larger parcels along key corridors
- Attractive to new residents and builders
- Good transit access

#### Challenges

- · Scarce in number; subject to gentrification and cost increases
- Small, individually owned parcels
- Political skepticism toward change and growth
- Somewhat car-dependent

**64.9**%

transit accessible

across place-type

place-type average

square miles 5.7% of urbanized Bay Area

64.2 415,700 housing units

14.6% of regional housing (2017)

place-type average

average drive alone rate

**55%** 1,092,757

14.3% of total Bay Area (2017)

189,800

5.2% of regional jobs (2015)



# 37

## **Small Lot and Streetcar Suburbs Tomorrow**

Build upon current assets and grow and diversify housing, ensuring that existing residents benefit from growth while amenities and transit improve

Fifty years from now, small lot and streetcar suburbs welcome many more residents into a wider range of housing types, local services, transit options and open space. Small parcels and walkable blocks provide an ideal framework for a community built densely enough to meet basic needs on foot and bike. These areas still provide abundant green space while retaining the traditional fabric of some of the best periods of Bay Area development.



#### Incremental Infill

The block and lot pattern of the streetcar suburb is an irreplaceable asset, one that supports walking while allowing for a mix of uses that can evolve over time. Growth should be maximized in these areas so that more people have access to the local amenities and can live a healthier lifestyle. New buildings should be thoughtfully inserted into the urban fabric, complementing (not imitating) what came before.

#### Within residential blocks:

- Eliminate single-family zoning to allow a range of building and unit types, from ADUs to "missing middle" buildings (two to six units) to smaller apartment buildings.
- Eliminate parking requirements to facilitate growth through "missing middle" development

- and encourage other transportation modes.
- Allow a mix of uses, including small commercial services, live-work spaces, cultural uses and retail.
- Allow consolidations of a few lots (two to three parcels), but not large-scale erasure, to enable greater density while preserving the fine-grained pattern.

#### On adjacent corridors:

- Allow significant height increases and limit parking.
- Allow a mix of denser affordable and market-rate housing, office and retail.
- Encourage storefront retail and flexible uses that can activate the ground floor.

**30**%

of total increase in housing units (2070)

**415,700** housing units (today)

**+649,100** new housing units (2070)

6%

of total increase in jobs (2070)

**189,800** jobs (today)

**+132,000** new jobs (2070)



#### **An Equity Stake**

In equity priority communities, policies should be enacted to ensure that long-standing residents, especially those with low incomes, can remain in place if they choose. Strategies could include:

- Nonprofit acquisition of existing apartments with low-income tenants to make the units permanently affordable
- Acquisition of land for future affordable housing development
- Assessments on newly developed or "flipped" parcels to finance public realm improvements, amenities and community services, as well as a low interest homeimprovement/ADU loan fund
- Down-payment assistance to aid existing renters in purchasing their homes
- Community-driven decisions on public realm investments funded by new development
- Preferential access for longtime renters to new affordable units



#### **Streets for People**

Although these street networks are often conducive to walking, the streets themselves are generally designed primarily to move traffic and store cars. As densities increase in these areas and transportation options change, valuable street space could be reclaimed for playgrounds, gardens and dog runs, retaining slow vehicular access and improving safety. Imagine kids having the run of the neighborhood and older folks sitting outside in new street gardens.

- Temporary street reconfigurations using parking and simple barricades could limit and slow through traffic and test new configurations and activities based on community priorities.
- Community residents could have a role in directing how the public improvement funds raised by new development are spent and in ensuring that improvements are serving local needs.
- Shared/slow streets, based on the Dutch woonerf and Catalan superilles models, could convert conventional neighborhood streets into community assets that help lower temperatures and reduce stormwater runoff and heat.

Precedent: Woonerf, The Netherlands



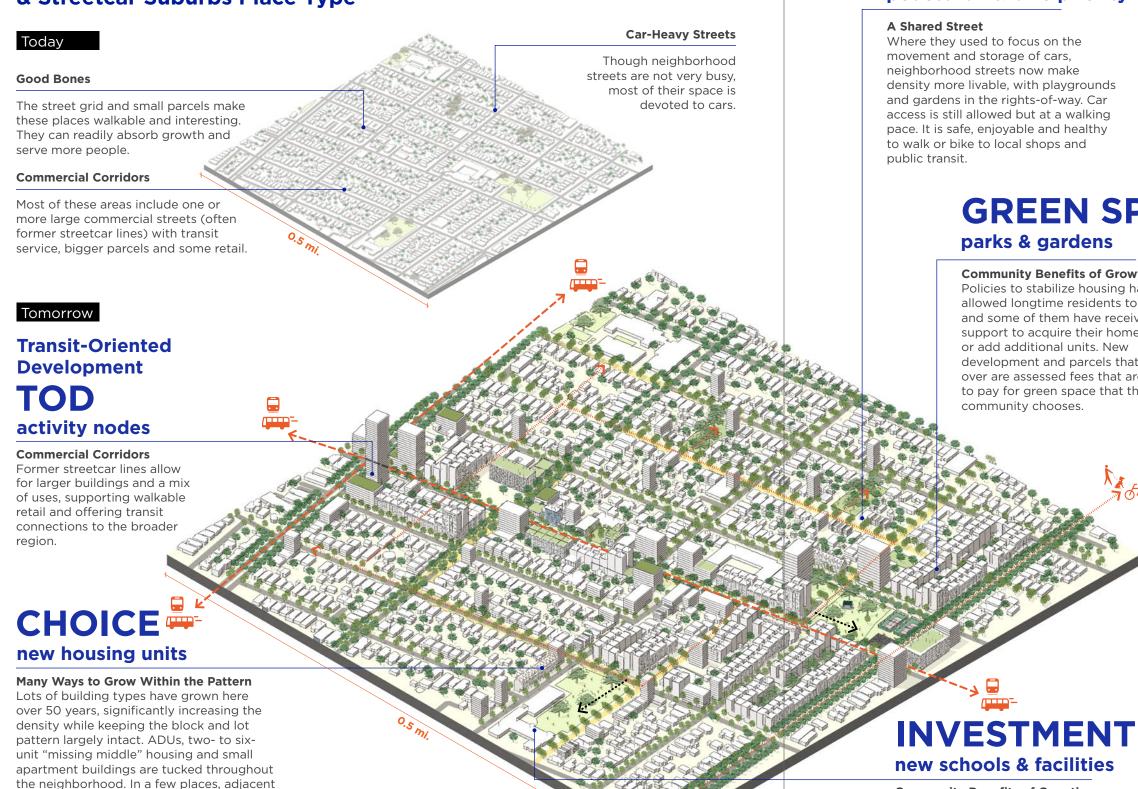
Precedent: Superille, Barcelona



parcels have been combined to allow more

density.

#### Illustrative example of Small Lot & Streetcar Suburbs Place Type



# +3 miles

#### pedestrian & bike priority

#### **A Shared Street**

Where they used to focus on the movement and storage of cars, neighborhood streets now make density more livable, with playgrounds and gardens in the rights-of-way. Car access is still allowed but at a walking pace. It is safe, enjoyable and healthy to walk or bike to local shops and public transit.

**Community Benefits of Growth** 

New growth has spurred the

creation of new schools and community centers, which serve all

neighborhood residents.

## **GREEN SPACE**

#### parks & gardens

#### **Community Benefits of Growth**

Policies to stabilize housing have allowed longtime residents to stay, and some of them have received support to acquire their homes or add additional units. New development and parcels that turn over are assessed fees that are used to pay for green space that the community chooses.

- Eliminate parking requirements.
- Limit parcel consolidation to allow intensification within the existing
- Allow taller buildings with flexible ground-floor uses in transit corridors.

#### Average increase required to support growth

+2,526

+517

housing units per square half-mile\*

average increase in jobs per square half-mile

\*The image to the left represents considerably more growth than the average, for illustrative purposes. Within each place type, growth should be concentrated in areas served by transit.

#### **Key Policies**

- Eliminate single-family zoning regionwide.
- Allow (and encourage) narrow, slow and shared-function streets.
- Stabilize housing for low-income residents with policy that supports just cause eviction, anti-gouging and nonprofit acquisition of housing.
- Create an Assessment/Community Benefit District funded by new developments and properties that are sold.
- Disseminate Benefit District funds through participatory budgeting, a democratic process which allows community members to decide how to spend part of a public budget.
- Create and implement a Section 8 accessory dwelling unit (ADU) program in low-income areas.

#### **Small Lot and Streetcar Suburbs tomorrow**

**A commercial corridor:** This thoroughfare — originally a streetcar line — is a return to form, with bigger buildings that support walkable retail and transit connections to the broader region.





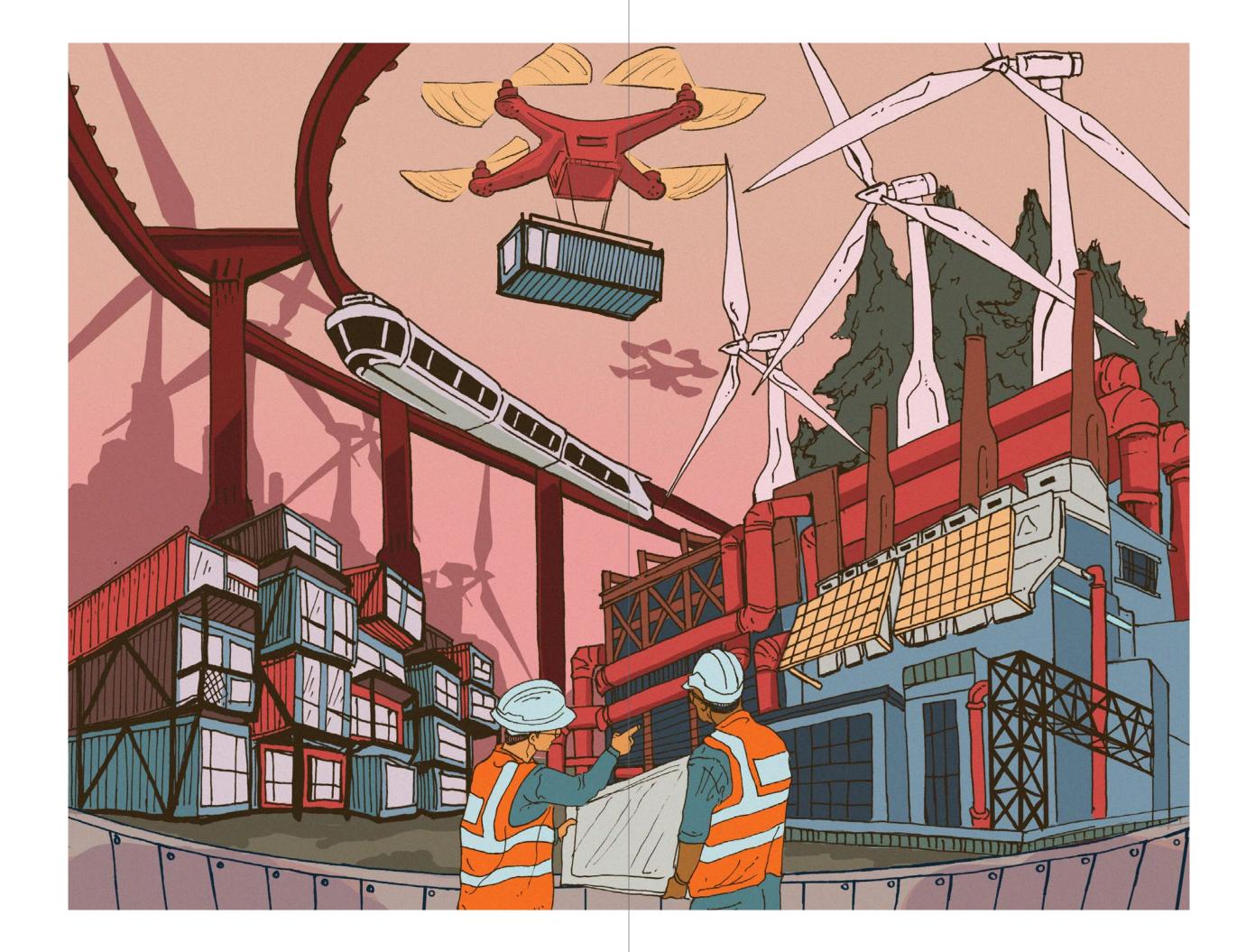


RYAN FLOYD JOHNSON



# Industrial & Infrastructure

In 50 years, industrial and infrastructure spaces are smarter, denser and greener, adapted to climate hazards and preserved as working land.



# **Industrial** and **Infrastructure Today**

These places provide accessible jobs and economic diversity but face environmental challenges

This place type represents the lowest density among areas with jobs and includes land used for transportation and utility infrastructure. It is most often found along the bay's edge, where it was built on filled baylands near highway and freightrail infrastructure. As a result, it tends to occupy low-lying areas that will be subject to regular or permanent flooding with sea level rise.

Industrial and infrastructure areas generally consist of inexpensive single-story buildings with substantial paved surfaces for parking, staging, storage and logistics areas. Many of these lands have experienced environmental pollution that can be difficult and expensive to remediate.

A significant number of low- and middle-skilled jobs are located here, contributing to the region's economic diversity and equity. In many areas, industrial lands face economic pressure to convert to other, higher-value uses such as housing or commercial office space. But once that conversion happens, it can be difficult to replace the flexible economic resource that industrial lands offer, especially in the region's

#### Assets

- · Source of low- and middle-skilled
- · Abundant, underutilized, flexible and often affordable land
- Large lots often under single ownership
- · Wide range of economic and logistical support functions

#### **Challenges**

- Low densities
- Often vulnerable to coastal/ groundwater flooding and sea level
- Car-dependent; not served by
- Very limited amenities and services
- Large paved areas that produce heat and stormwater runoff
- Environmental pollution

**25.9**%

**37.8** transit accessible

walkscore across place-type place-type average 203.9

square miles 18.1% of urbanized Bay Area

257,000

housing units

9% of regional housing (2017)

place-type average

average drive alone rate

706,455

9.3% of total Bay Area (2017)

930,000

25.4% of regional jobs (2015)

Current conditions: Emeryville Fremont Antioch Bayshore San Francisco Alameda San Mateo Santa Clara Distribution of Industrial & Infrastructure place type in the San Francisco Bay Area Total Bay Area Urbanized Bay Area Industrial & Infrastructure **AECOM for SPUR** 

# 5

# Industrial and Infrastructure Tomorrow

To address pressure from both climate hazards and conversion to other uses, industrial land will need to get smarter, denser and greener

In the future Bay Area, new multilevel facilities accommodate clean industrial and logistics activities, supported by state of-the-art telecommunications, energy and distribution systems.

With new technologies limiting noise and pollution impacts, productive activities need not be separated from other functions. Fossil fuels — and the industries that move, store and refine them — have been phased out, and the movement of goods throughout the region has been electrified. Ecodistrict systems bring new efficiency to energy, water and transportation functions. Green infrastructure and floodable basins absorb stormwater runoff, while the advancing waters of the bay are managed through a mixture of retreat, consolidation, protective structures and ecological restoration.

## 0

# Maintaining the Industrial Land Supply

Cities need space for logistics, storage, distribution and manufacturing, including uses and activities that are not compatible with residential housing because of noise or emissions. Industrial areas also provide jobs at the lower end of the wage scale, helping a diverse workforce remain in the region. Both sea level rise and the market's demand for housing put pressure on industrial land, which is difficult to replace, especially in the region's core near key infrastructure for moving goods. Converting the industrial land supply to urban uses like housing should be limited to areas with exceptional regional transit access.



# **Green, Equitable Industries**

The Bay Area is already a leader in a variety of green technologies, including solar power, batteries and electric vehicles (EVs). In addition, advanced manufacturing provides a bridge between the burgeoning technology sector and traditional industrial activities. Continued investment in industrial uses could help the region address many of its pressing problems by developing new solutions in green energy, mobility and housing. Prefabricated housing, for example, could provide good low- to middle-skilled jobs while also improving housing affordability.

Precedent: Prologis, California



Precedent: Rolls Royce Factory, UK



of total increase in housing units (2070)

**+192,000** new housing units (2070)

**257,000** housing units (today)

**24**%

of total increase in jobs (2070)

**930,000** jobs (today)

**+511,000** new jobs (2070)

#### 3

# **Industrial Activities**

With a limited supply of industrial land in a growing region, industrial functions will need to use space more efficiently. This could happen through changing technologies (as exemplified by the containerization of ports in the past, or more compact wastewater facilities in the future), automation and/or supply chain innovations that reduce space needs. The transition to multistory industrial warehousing is already happening in numerous spaceconstrained cities globally.

Reducing the actual footprint and building impact of industrial facilities could be key to adapting to sea level rise, allowing for a recovery of low-lying industrial areas and the managed retreat from rising waters at key locations. Such strategies could complement projects like restoring the baylands, protecting or reconstructing public infrastructure and providing shoreline access and recreational resources.



#### Layer in Environmental Services

Industrial lands often make extensive use of space, with large low-slung buildings and paved areas. These represent opportunities to incorporate environmental services if the appropriate incentives can be developed. Examples might include:

- Scalable solar energy production on industrial buildings through third-party providers. Incentives and regulatory streamlining could support this initiative at a large scale.
- Green stormwater management through landscaping, swales and infiltration basins that capture runoff from the large impermeable surfaces. Appropriate incentives through the Regional Water Quality Control Boards could be integrated with site remediation and shoreline adaptation processes

#### **5** Focus: Ecology

#### **District-Scale Environmental Systems**

The combination of large parcels and few owners could make it easier to develop efficient solutions to a number of environmental challenges. Eco-districts could combine numerous systems at this scale, including:

- Stormwater management through green infrastructure
- Parking and transportation demand management (TDM) at the district scale
- Green energy production and resilient micro-grid distribution
- District heating, cooling and cogeneration
- Solid waste composting and recycling

#### Illustrative example of Industrial & Infrastructure Place Type

**Lots of Parking** 

Today

Industrial areas are largely impermeable, contributing to surface runoff and excess

#### **Low-Density and Low-Lying**

Industrial areas are especially prominent in low-lying areas near transportation infrastructure at the bay's edge, exposing them to coastal and groundwater flooding due to sea level rise. Low densities don't always justify big resilience investments.

#### Tomorrow

## **RESILIENCE**

#### **Bay restoration**

**Adapting to Sea Level Rise** Developed areas have been consolidated behind a protective levee, with some land restored as wetlands and other habitat.

## **TRANSPORT**

#### green transport

#### **Goods Movement Cleanup**

Climate and air quality imperatives, along with improvements in technology, have moved trucks and freight rail to electric and hydrogen power, sparing nearby communities the pollution and noise that have historically impacted low-income neighborhoods.

# **INNOVATION**

#### new manufacturing

A Diverse Range of

**Jobs and Industries** 

Industrial areas offer

economy, essential

lower-skilled jobs.

support functions and

relatively inexpensive land

that supports a diversified

region, some industrial and logistics facilities have gone vertical, taking advantage of new technologies and building types to do more with less

## **GREEN** energy efficient

#### **Green Infrastructure**

Energy, heat, waste materials and parking are all managed at the district scale. Extensive paving has been broken up with the introduction of swales, rain gardens and floodable basins in the landscape. All of this prevents urban runoff pollution, moderates heat and complements wild habitats.

prefab housing

Large-scale off-site housing production

provides good union jobs while helping

the region meet its ambitious housing

**Employing Solutions** 

goals.

> K₂ 640

**NEW HOMES** 

# unions.

\*required housing units not shown in this specific example where industrial land use remains industrial

#### **Building Up**

With land at a premium in a growing

#### Average increase required to support growth

+221\*

housing units per square half-mile\*

+588 average increase in jobs per square half-

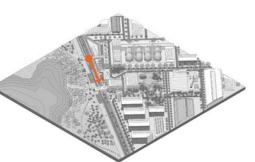
\*The image to the left represents considerably more growth than the average, for illustrative purposes. Within each place type, growth should be concentrated in areas served by transit.

#### **Key Policies**

- Coordinate investment in adaptation measures, consolidating land behind levees and protecting critical infrastructure.
- Prevent the loss of industrial land to housing and commercial uses, except near major regional transit stations.
- Convert goods movement and manufacturing to electric and/or hydrogen power as part of the effort to make the Bay Area fossil-free.
- Use incentives and regulatory tools to promote solar energy production, green stormwater management, and energy, heat and materials management within districts.
- · Invest in industrial efficiency and green manufacturing, including batteries, solar and wind equipment, clean vehicles and low-carbon cement.
- Ramp up modular housing through code reform and collaboration with building and construction trade

#### **Industrial & Infrastructure tomorrow**

**Automated Shuttles:** Workers manage a high-performing industrial hub with electrical goods movement and autonomous systems. An industrial ecosystem manages energy, water, heat and waste for maximum fossil-free efficiency.







RYAN FLOYD JOHNSON



# **Office Parks**

In 50 years, office parks are job centers, enlivened by better transit access and an infusion of housing, services and green space.



# **Office Parks Today**

Built around the car, these oftennondescript workhorses are ripe for transformation

Low-density commercial areas that were typically developed near freeway or arterial intersections, office parks play an important role in the region's economy. But they were built for another age and have negative impacts on our environment and transportation system. Generally consisting of large one- to two-story buildings surrounded by surface parking, these areas reflect the bygone expectations of postwar suburbia.

Office parks are car-dependent. Large, inward-facing parcels make walking or cycling difficult, and with no nearby housing or amenities, there is little reason to try.

Large paved areas contribute to both stormwater runoff and increased temperatures. While a few of these places are distinctive and iconic corporate campuses, most are not — and therein lies an opportunity. The fact that these large parcels are under single ownership means that big changes can happen quickly to transform staid office buildings with new uses and activities that reduce car trips and make better use of the

#### **Assets**

- · Abundant, underutilized land
- Large lots under single ownership
- Flexible and standardized
- Open to change

#### Challenges

- Car-dependent; poorly served by
- Isolated and inward-facing
- · Single-use, with few amenities and
- Large paved areas that produce heat and contribute to runoff

**55.5**%

transit accessible

average drive alone rate

walkscore

3.8% of urbanized Bay Area

83,000 housing units

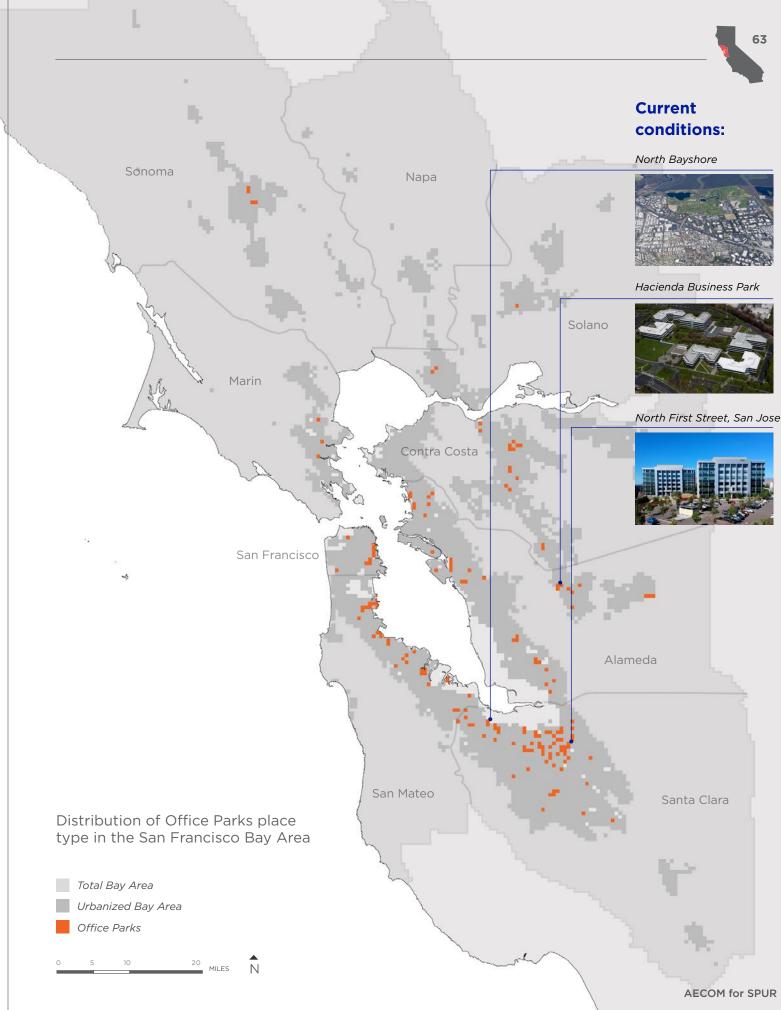
2.9% of regional housing (2017)

206,858

2.7% of total Bay Area (2017)

572,000

15.6% of regional jobs (2015)



across place-type

place-type average

42.5 square miles

place-type average

# 65

## **Office Parks Tomorrow**

The suburban workplace, brought to life by an infusion of housing, services and green space

Office parks retain the flexible, low-cost office buildings that businesses rely on, but add in complementary new uses and activities that enhance their economic and environmental performance. A variety of housing types introduce evening and weekend populations, allowing new amenities to thrive. Dining and services cluster near shuttle stops, serving both workers and residents and eventually justifying rapid transit links to the regional network. Parking, once the predominant land use. is gradually relocated to the outskirts while large, contiguous parcels allow for district-level, optimal environmental systems.

### O

#### Introducing New Uses

Office parks have traditionally been designed for privacy and the protection of ideas and innovation, but these large single-use areas make inefficient use of land and have created long, polluting commutes for many. Introducing complementary uses could increase both daytime and nighttime activities and make it possible for more people to live closer to work.

- Cities should zone for and incentivize a diverse range of housing types in employment zones.
- Adding housing to an existing job center creates day and night populations and helps to support retail, transportation and public space.
- A variety of workplace types vertical buildings, retail and live-work spaces — can complement traditional large-floorplate offices.
- Cities should encourage or require employee amenities like restaurants, gyms and laundries to serve the public.
- Schools, child care, libraries and senior services could be designed to benefit both employees and residents.



# **Clusters of New Activities**

Defining a clear center begins the process of organizing activities and functions in these areas. Things like a shuttle stop near an attractive gathering space and a café located near a building entrance could gradually expand to include bikeshare stations, child care facilities, retail and dining. Clusters of uses that support people's daily lives could draw workers and residents to these hubs, which in turn would support new commercial activities that locate there.

- Even a very small hub, if well designed and located, offers people a place to meet, talk and interact.
- The more activities and paths of travel converge there, the more distinct a place becomes.
- This center should be visible and accessible to the public, even if located on private property.
   Secure workspaces can still remain secure.

# Phase in Mobility Solutions

New and denser uses would require less parking and proactive mobility management. People should be able to get around via shuttles, bikes, micro-transit and walking, and denser uses could eventually justify connections to regional transit.

- Peripheral parking lots and temporary structures could free up core areas, and autonomous technologies could reduce the need to locate parking near buildings.
- A Transportation Management Association (TMA) representing multiple employers could fund, manage and price parking, carpooling and shuttle systems.
- A critical mass of land uses could eventually justify bus rapid transit (BRT) or other transit systems.

Precedent: Box, Redwood City





of total increase in housing units (2070)

**83,000** housing units (today)

4 Focus: Ecology

#### **District-scale Environmental Systems**

Large parcels allow for efficient solutions to numerous environmental challenges. Eco-districts could operate systems that work well at this scale, including:

- Stormwater management through green infrastructure
- Parking and transportation demand management
- Green energy production and resilient micro-grid distribution
- District heating, cooling and cogeneration
- Solid-waste management

6

# **Building Bridges**

Office parks have generally turned inward, separated from their neighbors through parking and buffers. As the mix of uses and amenities evolves, these places could become more accessible and inviting by:

of total increase in jobs (2070)

**+315,000** new jobs (2070)

**572,000** jobs (today)

- Forging connections to regional transit that serves both local and surrounding users
- Converting landscaped buffers to usable open space that connects to regional trails
- Turning ditches and culverts into environmental and open space assets
- Welcoming neighbors while protecting secure private spaces





#### Illustrative example of Office **Park Place Type**

positive sustainability.

+1,200 new housing **Lots of Free Parking** Today **Homes for All** Big paved areas use land Residential buildings have been **A World Apart** inefficiently, worsen heat added to underutilized sites. impacts and urban runoff — and They are both market-rate and Isolated from neighboring uses are only accessible by car. subsidized, serving workers, families by walls and buffers, office parks and seniors. are busy during work hours and empty at other times. A Pedestrian's Nightmare **URBAN HUB** Each big lot is built to face inward. Connections and crossings are limited. a new center Activity Services are concentrated at a Tomorrow small central hub. Dining and retail are supported by shuttle stops and community services like child **Transit-Oriented** care. Paths and trails radiate out **Development** to jobs, housing, open space and surrounding neighborhoods. TOD regional connectivity **Transit Opportunities** A mobility hub brings shuttles, dropoffs and, eventually, public transit into the heart of the site, helping to support a new, compact urban center. **NEW** environmental systems **District Utility Networks** With a few large parcels, a lot of things can happen at the district scale. Green energy production and microsurface parking areas grid distribution, green stormwater infrastructure and district heating and **District Parking at Margins** cooling closer to net-zero and even net-

#### Average increase required to support growth

+632

average increase in housing units per square half-mile\*

+1.808 average increase in jobs per square

\*The image to the left represents considerably more growth than the average, for illustrative purposes. Within each place type, growth should be concentrated in areas served by transit.

#### **Key Policies**

Instead of shaping this place, parking

serves it. Parking supply is managed and moved to peripheral locations as higher densities support shuttle and

transit options.

- Zone for a mix of uses at increased densities, including housing, retail and office space.
- Enable a flexible range of workplaces, from live-work spaces to incubators, coworking spaces, campuses and office towers, allowing companies to grow and evolve.
- Eliminate parking requirements in favor of aggressive, districtwide transportation demand management. Emphasize regional transit, carpooling, district shuttle services and microtransit.
- Institute environmental performance standards promoting environmentally efficient development.
- Provide a range of housing types at all income levels.

#### **Office Parks tomorrow**

A place for people: Moving parking to the edges makes streets safe and quiet for pedestrians and bikes. Automated shuttles provide internal circulation and regional transit connections.









ARTHUR MOUNT



# Urban Neighborhoods

In 50 years, Urban Neighborhoods offer eclectic vitality free from traffic and rich with texture, amenities and community life.



# **Urban Neighborhoods Today**

Offering the best of city life, these neighborhoods face increasing income inequality, displacement pressure and negative impacts from cars

In the Bay Area, the "urban neighborhoods" place type is found only in San Francisco and Oakland. In many ways, these neighborhoods embody the core advantages of city living: walkability, diversity, sustainability and convenience.

Their layered, mixed character reflects waves of transformation over more than a century. Nearly all are well served by public transit and offer all the needs of daily life within walking or biking distance. Built around the pedestrian, these are some of the only places in the region that are dense enough, even today, to enable residents to go car-free.

With immense assets, these areas also face significant challenges. They saw significant disinvestment and decline during the latter half of the 20th century, worsened by redlining that kept communities of color from building wealth and by misguided policies that put cars before people. In recent years, these once-neglected neighborhoods have rebounded. and rents have soared, impacting longtime residents who ought to benefit from new investment. These vulnerable populations are most severely impacted by the pollution, noise and dangers of car traffic. Such environments can be unwelcoming for children and older adults, resulting in a skewed population that often consists of affluent young people and low-income families and doesn't reflect the full diversity of the region.

#### Assets

- Walkable street and lot pattern
- Mix of uses at densities that support public transit
- · Excellent transit access
- Services and amenities within walking distance
- · Diverse communities with deep local connections
- Attractive to new residents and builders

#### Challenges

- · Subject to gentrification, displacement and rising housing
- · Small, individually owned parcels; few large opportunity sites
- · Political skepticism of change and growth
- Impacted by traffic and parking
- Lack of access to housing, opportunity, education and services for many residents

transit accessible across place-type

walkscore

place-type average

square miles

118,500 housing units

0.6% of urbanized Bay Area

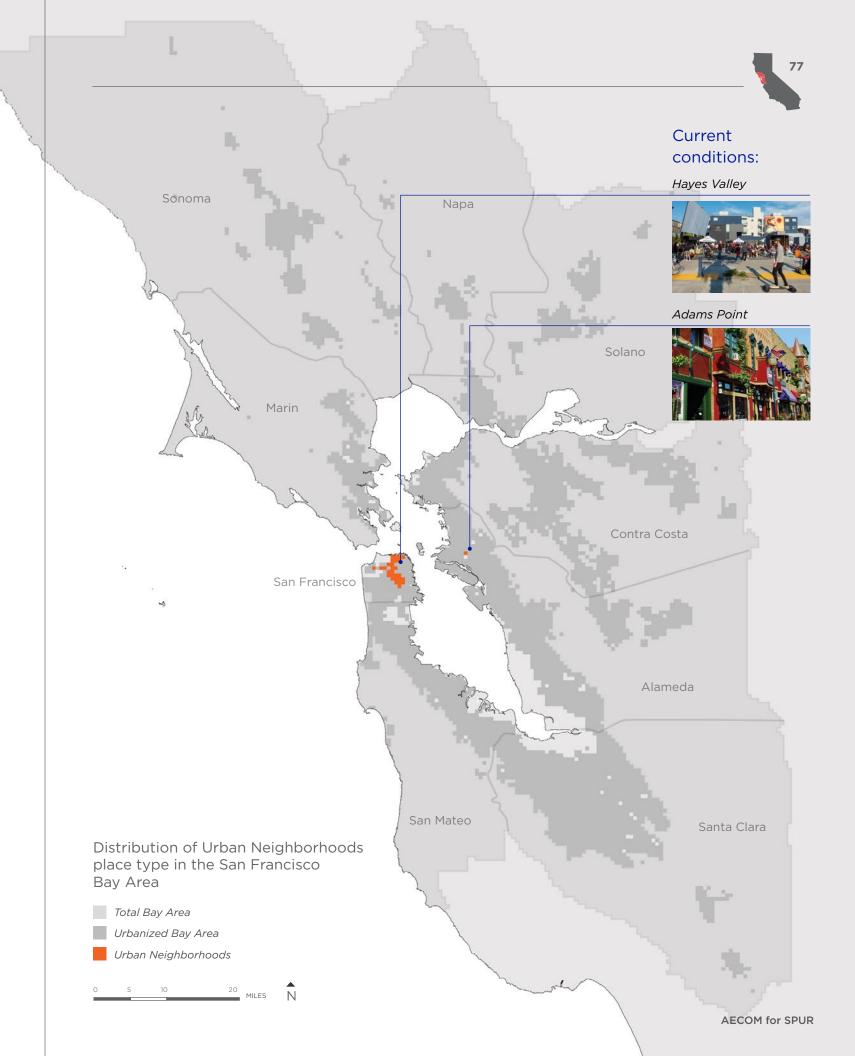
4.2% of regional housing (2017)

average drive alone rate 3.0% of total Bay Area (2017)

place-type average

83,500

2.3% of regional jobs (2015)



# **Urban Neighborhoods Tomorrow**

In 2070, Urban Neighborhoods offer community, eclecticism and vitality and many fewer cars

Communities are supported with the services and infrastructure they need, especially those whose residents are most vulnerable The block and lot pattern of this and at risk. Streets designed for people, not cars, encourage walking, biking and other alternatives to the automobile. Public space is oriented toward the community, with funds from new development leveraged to support communityselected projects and improvements. Development focuses on key corridors and routes to allow for rail and bus connectivity, enabling easy access to jobs and the rest of the Bay Area.



### **Welcoming Growth** to the Urban Core

place type is an irreplaceable asset. Growth should be maximized in these areas so that more people can live a healthy, low-emissions lifestyle. New buildings should be artfully inserted into the urban fabric. Because the fundamentals will persist even with significant increases in density, buildings need not match or imitate what came before. This context lends itself to variety and eclecticism.

#### Within residential blocks:

- · Liberalize zoning to allow a range of building and unit types, from ADUs to small apartment buildings to mixed towers near transit nodes.
- Eliminate parking requirements for new buildings to facilitate growth and encourage other modes of transportation.
- Allow a mix of uses, including small commercial services, live-work spaces, cultural uses and micro-retail
- Allow small consolidations of two to three parcels, but not large-scale erasure, to enable greater density

#### On adjacent corridors:

- · Allow significant height increases and limit parking.
- Support a mix of denser affordable and market-rate housing, office and
- Encourage street-fronting retail and flexible uses that can activate ground floors.





Precedent: Woonerf, The Netherlands



of total increase in jobs (2070)

**83,500** jobs (today)

**+108,000** new jobs (2070)

of total increase in housing units (2070)

**118,500** housing units (today)

**+157,000** new housing units (2070)



### **Diversity & Afford**ability Protected

In equity priority communities, policies should be enacted to ensure that long-standing residents, especially those with low incomes, can remain in their homes if they choose and can benefit from neighborhood investment. Strategies could include:

- Nonprofit acquisition of existing apartments with low-income tenants to make the homes permanently affordable
- · Acquisition of land for future affordable housing development
- Assessments on newly developed or "flipped" parcels to finance public realm improvements, amenities and community services
- A low-interest home-improvement/ ADU loan fund
- Down-payment assistance to help renters buy their homes
- · Community -driven decisions on public realm investments funded by new development
- Preferential access for longtime renters to new affordable units
- Protections for existing renters, including anti-gouging laws, justcause eviction and other policies



### Reinforcing **Transit**

Urban neighborhoods are generally connected to reliable, highfrequency transit. In immediate station areas, significantly higher densities — including some high-rise buildings - should be encouraged.

- Buildings should be designed to activate street frontages with ground-floor retail, professional services, child care, gyms and housing for all income levels.
- Key streets could be incrementally pedestrianized to create public space at station entrances. Events, markets and festivals could be used to activate these areas.
- · Cultural uses like museums, galleries and performance spaces, along with bars and restaurants, could reinforce neighborhood identity in these locations and extend active hours.
- · Building heights and densities should increase in proximity to stations, with particular care paid to the transition from residential blocks into station areas.



## **Space for Communities, not Cars**

Urban neighborhoods already have the ingredients of sustainable cities, but despite high marks in public transit availability and environmental performance, they are heavily impacted by the car. The spaces currently used to move and store cars could be repurposed to make these neighborhoods safer and more comfortable for people of all ages and abilities.

- · Residential streets could be converted to "car-light" zones, modeled on Dutch woonerven or Barcelona's superilles. in which vehicle access is permitted at a walking pace but the right-ofway serves a variety of uses, including playgrounds, seating and gardens, improving both community and environmental conditions.
- Parking requirements could be eliminated, and parking discouraged or prohibited in new development. Over time, as transit improves and new technologies and micro-mobility become widespread, existing parking could be converted to new uses, such as additional housing and green space
- In transit station areas, some streets could be pedestrianized over time to create car-free hubs of retail, commercial and civic activity.

## Illustrative example of Urban Neighborhoods Place Type

### Underutilized urban fabric

Walkable and well served by transit, this type should be available to more people.

#### **Car-Heavy Streets**

Today

Some of the only neighborhoods in the region that are dense enough today to allow a car-free life are heavily impacted by traffic and parking.

### Tomorrow

# Transit-Oriented Development

## **TOD**

### regional access

## **The Station Hub**Density increases around

the rail station, and carfree streets host markets and other events. Retail and restaurants are complemented by cultural venues, child care and other community services.

# **LESS TRAFFIC**

### high Walk Score

#### **Car-Light and Car-Free**

The neighborhood is safer, cleaner and quieter, with "car-light" zones allowing for slow access. The emphasis is on green space, playgrounds and walking. Denser transit hubs are simply car-free.

# **HOUSING OPTIONS**

#### new residential units

**Limited Public Space** 

With some exceptions.

built environment fails

comfort of people and

to put the safety and

communities first.

public space is limited to a

few heavily used parks. The

#### Affordability, Diversity, and Growth

Policies to stabilize housing have let longtime residents stay, and a large segment of new growth is permanently affordable housing. New development helps pay for green space that the community helps to create.

# **WALKABILITY**

#### new residential units

#### The Right Place To Grow

People living here drive less, walk more and show the region what an urban future can look like. The neighborhood has welcomed more people while safeguarding its assets — walkability, diversity and character. A wide range of building types have been tucked into the existing fabric while preserving the block pattern and historic building stock.

# OPEN SPACE accessible green

### The Public Realm

A continuous network of public spaces, including streets, plazas, gardens and parks of all sizes, makes density comfortable and connects communities with local services and amenities.

# Average increase required to support growth

+5,425 average increase

+3,746

housing units per in jobs per square square half-mile\* average increase in jobs per square half-mile

\*The image to the left represents considerably more growth than the average, for illustrative purposes. Within each place type, growth should be concentrated in areas served by transit.

#### **Key Policies**

- Eliminate single-family zoning throughout the region.
- In consultation with neighborhood residents, designate safe/slow and shared-function streets.
- Stabilize housing for low-income residents, with protections like just cause eviction, anti-gouging laws and nonprofit acquisition of housing.
- Establish a community amenity fund for green space financed by new development.
- Support design approaches that acknowledge, complement and enhance each neighborhood's unique assets.
- Eliminate minimum parking requirements.
- Permit the consolidation of a few parcels to enable pockets of higherdensity, multifamily housing where possible.

## **Urban Neighborhoods tomorrow**

**People First:** With few cars around, residents and commuters can walk around the transit hub safely, accessing a wide range of services easily.









# **Dense Urban Mix**

In 50 years, Dense Urban Mix districts are bustling and accessible 24-hour destinations.



# **Dense Urban Mix Today**

With the best transit access in the region, these places enable everyone to leave the car behind

The Bay Area's dense urban neighborhoods lie at the economic and cultural heart of the region and at the crossroads of major transit systems. They offer a bustling and cosmopolitan mix of jobs, cultural activity, nightlife and shopping, along with housing at high densities in a mix of old and new buildings. These places are positioned to thrive at very high densities, but to unlock their potential, we must put people, not cars, first.

Well served by rapid transit, these places feature a wide range of culture, retail, hospitality, jobs and housing. Major parades, festivals and protests happen here. Contemporary structures coexist with historic buildings and beloved civic spaces, and a dense mix of buildings meets the street. Local mobility options include excellent public transit, bikes, taxis, scooters and, above all, walking. But there are downsides: A significant low-income population calls these areas home, and many unhoused people have landed here as well. These places can only thrive if the needs of all people are met.

#### **Assets**

- Walkable urban block pattern
- Excellent transit
- High commercial and residential density, with diverse building stock and housing types
- Destinations for shopping, culture and nightlife
- A draw for visitors from the region and the world
- Civic identity; a site for major gatherings
- Dense enough to function without cars

#### **Challenges**

- Heavily impacted by traffic and caroriented planning
- Persistent poverty among some resident populations
- High numbers of unhoused people

transit accessible

89.9

walkscore

square miles

**34,500** housing units

place-type average 0.15% of urbanized Bay Area

1.2% of regional housing (2017)

20%

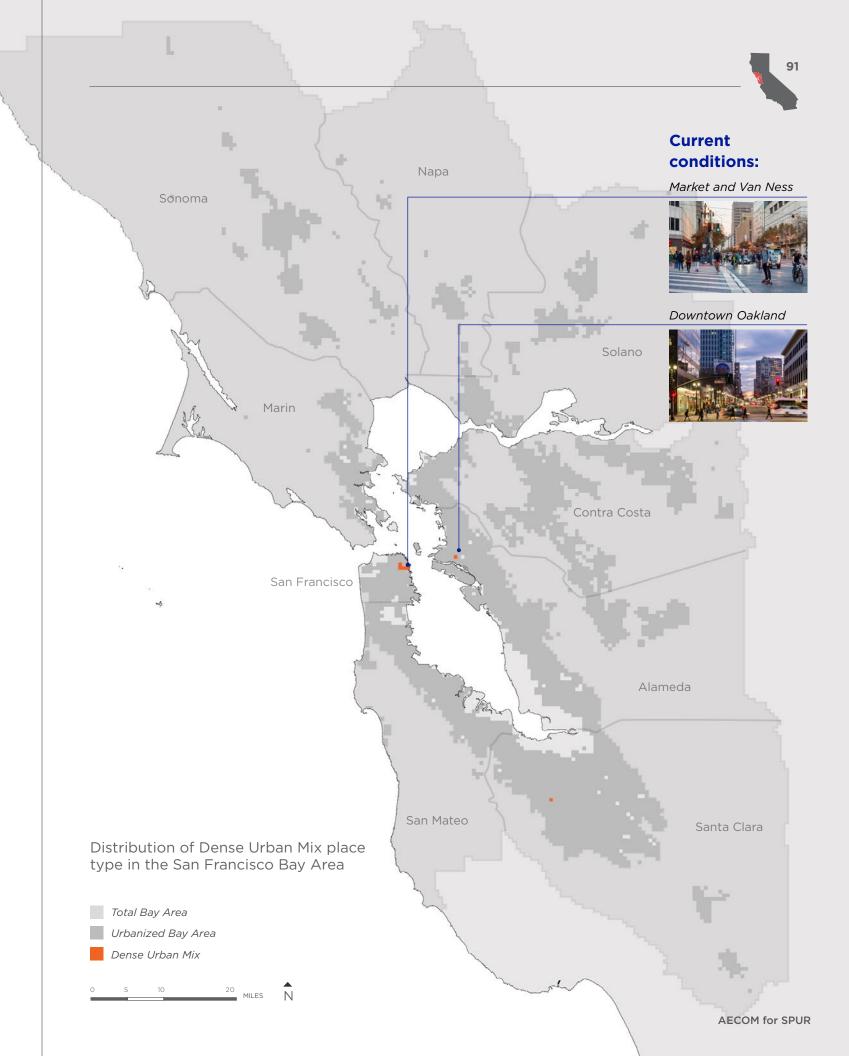
place-type average

average drive alone rate

0.7% of total Bay Area (2017)

177,000

4.8% of regional jobs (2015)



# **Dense Urban Mix Tomorrow**

# Bustling, 24-hour destinations for everyone

These places — just a few in the region — can embrace the kind of dazzling vertical density seen in New York or Tokyo, with tall towers, bright lights and bustling crowds of pedestrians around the clock. This density is supported by a world-class public realm, with well-managed streets, plazas and station concourses and a multilevel network of pedestrian connections. Offerings big and small, from food stalls to marketplaces to shops of every sort, enliven the area. Culture and arts abound. from top-notch theater to buskers and dance clubs, and the Bay Area's rich tapestry of cultures is on display. Locals and visitors alike come here to see and be seen, to take part in the life of the city.

### **Beyond the Car**

These places lie at the crossroads of the region's rapid transit networks, and more than anywhere else, they could evolve beyond dependence on the private car. Underground subway and regional rail put these neighborhoods in easy reach, making driving an expensive and illogical choice. Over time, we could build on this by:

- Phasing private cars out of most streets in favor of mass transit, micro-transit, bikes and investment in the public realm
- Gradually converting parking garages to other uses while transit centers, autonomous vehicles and ride-hailing services reduce the need for cars and parking structures



### **High-Performance Public Space**

These places must be built for crowds, from the subway platform to the sidewalk to the civic plaza to the roof terrace. Sustained investment is necessary to support a dense urban core, as is active engagement to manage, program and maintain it. Collaboration among public agencies — transit providers, city governments and community benefit districts (CBDs) — will be instrumental in the evolution of these neighborhoods.

of total increase in jobs (2070)

**177,000** jobs (today)

**+176.000** new jobs (2070)

**34,500** housing units (today)

**+65,000** new housing units (2070)

of total increase in housing units (2070)



### Lifting **Everyone Up**

Vertical density is expensive and reflects the tremendous value of transit-rich land at the core. A portion of the high returns that are possible here should be captured to provide permanently affordable housing and social services to people in need, many of whom made a home in these inner-city locations when others fled for the suburbs. Inclusionary zoning and density bonuses are important policy levers in this context. Supportive housing, navigation centers and social services, supported by a mix of public, private, and philanthropic funding, could ensure that everyone, regardless of income, has a place to call home.



## **Bold, Exuberant Density**

Although many parts of the Bay Area call for a delicate, balanced approach to growth, these transitheavy districts thrive on vertical density and big-city character. Valuable historic buildings should be preserved and integrated, but otherwise the sky is the limit. But tall is not enough — these districts should pulse with life, with active frontages on multiple levels, bright lights and a mix of culture, dining and entertainment 24 hours a day.



### **Urban Green** Heart

These are constructed environments and can feel like the antithesis of nature, but they have an important role to play in a sustainable urban region.

- In per capita emissions, these are among the most environmentally efficient places in the world.
- Cars could be almost completely eliminated here.
- · Green roofs and walls, street trees, terraces and other features could mitigate heat and runoff while beautifying the urban experience.

Precedent: Times Square Pedestrian Plaza



Precedent: Shibuya, Tokyo



Precedent: Piccadilly Circus, London



# Illustrative example of Dense Urban Mix Place Type

Excellent Transit

Here more than anywhere in the region, the rapid transit network

makes the car unnecessary.

# Urban Blocks & Layers of Buildings

Today

Many of the fundamentals of city life can be found here. The streets and blocks support walking, and the buildings present rich layers of urban history.

### Tomorrow

24/7

### activity and services

#### **Serious Density**

At this transit crossroads, towers of all sorts host every conceivable activity, with shopping, culture and nightlife backed by hotels, offices, homes and essential services, such as health care, education and child care, for those who live and work here.

# CIVIC

### high walkscore

#### **People First**

Cars are not practical, and streets have been reclaimed as civic spaces at the heart of a comprehensive public realm. Streets and plazas hum with life, and at these densities, small businesses thrive, whether they're located underground or several floors up.

# -60% carbon reduction

**20th Century Hangover** 

with buildings that do not

support street life, reflect an

Traffic-heavy streets, garages and freeways, along

antiquated period

of city planning.

#### **Green Spaces Go Vertical**

Beyond the inherent efficiencies of this compact setting, green roofs, walls and streets soften public spaces while providing environmental benefits.

# **-90%** parking structures

#### **Converted Garages**

With parking less relevant than ever, garages have been either redeveloped or repurposed as mobility, logistics and delivery centers, art spaces or rooftop parks.

# Transit-Oriented Development

# **TOD**

### regional access

#### **Transit Galore**

The region's highest density of transit options supports retail, restaurants, culture and services accessible to all.

# Average increase required to support growth

+9,396

+25,252

average increase in housing units per square half-mile\* average increase in jobs per square half-mile

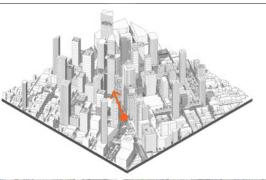
\*The image to the left represents considerably more growth than the average, for illustrative purposes. Within each place type, growth should be concentrated in areas served by transit.

#### **Key Policies**

- Continue to invest in multiple rapid transit systems, along with local transit and complementary bus, shuttle and ride-share services.
- Encourage vertical density, with basic form and tower separation controls.
- Institute inclusionary zoning and assessment districts to provide permanently affordable housing with comprehensive services for vulnerable populations.
- Activate ground floors and upper floors with a variety of public-serving spaces.
- Encourage small retail and food service uses in transit and plaza spaces.
- Support the conversion of parking garages into other uses, such as offices, community facilities, entertainment and cultural venues, and even housing.
- Eliminate parking requirements for new buildings.
- Phase out private cars and ride-hailing services from the busiest streets.
- Establish assessment districts funded by new development to support the investment and management of public spaces.

## Dense Urban Mix tomorrow

**A Civic Place:** Buzzing with activity at all hours, these districts draw people from around the region and around the world into the spectacle of urban life. The best transit in the region allows them to be virtually car-free.







# A Call to Action



This investigation shows that the Bay Area has the space to accommodate the growth expected in the next half century without paving over open space and farmland — but only if we are willing to embrace real change.

This is a 50-year vision — one that many of us won't be around to see. It shows that, far from being "one size fits all," growth can be responsive, building on the best aspects of the region we know today, while addressing many of its shortcomings and inequities.

It may be tempting to compare this vision to the Bay Area as we know it today. Instead, we must compare it what would happen with 50 more years of business as usual: more uncoordinated growth, an even greater housing shortage, further segregation by race and privilege, worse traffic, and far more people left behind, priced out or homeless. We must do better.

The proposals here represent the physical expression of a new social compact. One in which we as a region commit ourselves to collectively tackling the formidable and entangled challenges of housing, transportation, equity and climate change.

What this document doesn't do is show us how we get there. That will require profound changes in policies, practices, laws and culture. Other reports in the SPUR Regional Strategy are building out this policy roadmap, with clear recommendations targeting specific agencies and actors. The complete library of Regional Strategy reports is available at spur.org/regionalstrategy/reports. That research addresses how to:

ISHITA JAIN



Make equity a core principle,

investing in health, safety and stable housing so low-income communities and people impacted by systemic racism can stay in their neighborhoods and benefit from growth.

Allow housing to be built in a lot more places, eliminating exclusionary zoning, allowing for a wide range of housing types, and making it easier to build housing in urban areas and near transit.

Reinvent how and what we build, bringing down costs through innovations like secondary units, "missing middle" housing, modular manufacturing and mass timber construction.

Scale up affordable housing and support middle-income housing, with robust funding for acquisition and new development of permanently affordable units and policies that support workforce housing.

Create new mechanisms to fund and deliver the changes we need, with major governance innovations in the delivery of infrastructure, housing and community development.

system, including rail networks, regional express bus and streets that truly prioritize cycling and walking in neighborhoods and transit station areas.

Design communities for people, not for cars, prioritizing human safety, health, comfort and community over the movement and storage of private vehicles.

**Build complete communities that** support daily life, with work, school, shopping and recreation accessible to many more people by foot and bike.

This isn't about changing one thing - it's about making a series of **Invest in a 21st-century transportation** related changes, at different levels of government, over many decades. It's never easy for societies to commit to massive change, especially when they can't see ahead to the outcome. We hope *Model Places* gives a glimpse of what's possible and inspires a commitment to what's needed.



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